

## **REMARKS**

This is in response to the non-final Office Action of March 23, 2010. Claims 1-3, 5-27, 29 and 30 are pending. Claims 1, 15, 16, 18, and 19 are currently amended. Claims 11, 17, 21, 22, 25-27, 29, and 30 are withdrawn from consideration.

Reconsideration of the application as amended is respectfully requested.

## **The Office Action**

Claims 15 and 18 are objected to because of informalities.

Claims 1, 16, 18, 19, 20, 23, and 24 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-3, 6-9, 12, 15, 18-20, 23 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over one of Wright (U.S. Patent No. 4,744,278) in view of Funakubo (U.S. Patent No. 3,800,633).

Claims 1-3, 6-9, 13-16, 18-20, 23 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Raetz (U.S. Pat. No. 3,547,167) in view of Funakubo (U.S. Pat. No. 3,800,633), or in the alternative, over Raetz in view of Funakubo and Wright.

Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Wright in view of Funakubo or the combination of Raetz in view of Funakubo as applied to claim 1, and further in view of any one of Ackley (U.S. Pat. No. 2,725,083), Oehrli (U.S. Patent No. 3,144,059), Ehlen (U.S Pat. No. 3,308,859).

Claim 10 is rejected under 35 U.S.C. §103(a) as being unpatentable over Wright in view of Funakubo or the combination of Raetz in view of Funakubo as applied to claim 1, and further in view of any one of Dawson (U.S. Pat. No. 3,023,490) or Gaddis (U.S. Pat. No. 4,750,396).

## **Claim Objections**

Claims 15 and 18 are objected to for minor informalities. Claim 15 has been amended to recite “wherein said cutting member and said seat surface each consists essentially of sintered and compacted particles of abrasion resistant material. Additionally, claim 18 has been amended to recite “the mating” rather than “an mating”. Accordingly, the objections should be withdrawn

### **Indefiniteness Rejection**

Claims 1, 16, 18, 19, 20, 23, and 24 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, with reference to claims 1 and 19, the Examiner asserts that the recitation “relative to a direction of chain travel” renders the claims vague and indefinite, since the structure of the link is being positively defined in terms of the chain which is not set forth as part of the claimed invention. Applicant respectfully submits that claims 1 and 19 have been amended to recite that the base member includes a lead end and a rear end, and is adapted to be pivotally connected to an associated connecting link at each end forming the saw chain. Accordingly, Applicant submits that the chain is properly defined as part of the claimed invention, and therefore, the claim is not indefinite or vague.

With regard to claim 16, the Examiner submits that the phrase “relative to a direction of travel of said cutting member” is vague and indefinite as to how the angle is measured since it is being measured in terms of an intended use of the cutting member and not relative to the structure of the claimed invention. Applicant submits that claim 16 has been amended to depend from independent claim 15, and the amendments have rendered this rejection moot.

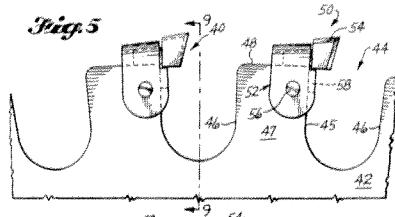
Regarding claim 18, the Examiner submits that the recitation “relative to a direction of travel of the base member when fastened on the chain” is vague and indefinite because the base member is being defined in terms of the chain, which is not part of the claimed invention. As amended, however, claim 18 recites that the base member includes a lead end and a rear end and is adapted to be pivotally connected to an associated connecting link at each end forming a saw chain. Accordingly, stating that the taper is angled relative to the direction of intended travel the base member when fastened on the chain, is properly defined, since the chain is part of the claimed invention. Additionally, claim 18 has been amended to recite that each pair of tapers is adapted to mate with a taper on a cutting member and has a close tolerance comprising no more than 0.5° to the mating taper of the associated cutting member, such that the limitation is properly defined.

### **Obviousness Rejections**

Claims 1-3, 6-9, 12, 15, 18-20, 23, and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wright in view of Funakubo. Applicants respectfully traverse for at least the following reason. Wright and Funakubo do not, individually or in combination, teach or suggest the subject limitations as presently claimed.

As amended, independent claims 1, 15 and 19 (and similarly claim 18) are directed to a quick change cutting link for a saw chain for cutting wood including a base member having a leading end and a rear end, adapted to be pivotally connected to connecting links at each end forming the saw chain. The base member includes a seat surface having a first taper and a lower surface having a second taper. The cutting link further includes a cutting member that comprises a cutting edge and releasably engages the base member. The cutting member includes an upper surface having a third taper and an under surface having a fourth taper. The upper surface with the third taper is constructed from sintered compacted particles of abrasion resistant material. The first taper and the third taper extend at an angle ranging from about 0.5° to about 45° relative to a direction of intended chain travel and the second and fourth tapers extend at an angle of about 0.5° to about 45° relative to a direction opposite of intended chain travel. Each pair of tapers is at a close tolerance effective to cause self-locking engagement of the first taper of the seat surface and the third taper of said cutting member surface and of the second taper of the lower surface and the fourth taper of the cutting member surface.

According to the Examiner, Wright discloses a link for a saw chain including the base member adapted to be pivotally connected to other links of the saw chain in that it has pivot openings and is fully capable of being pivotally connected to other structures including various forms of other links. Although Applicant disagrees with the Examiner's reasoning, claims 1, 15, 18 and 19 have been amended to clarify that the subject base member has a front end and a rear end and is adapted to be pivotally connected to connecting links at each end forming a saw chain. In contrast, Wright is directed to a replaceable cutter element for a circular saw including a clevis and an insertable tooth. Applicant maintains that a circular saw blade by design does not include a chain comprised of connecting links. As illustrated below, the clevis 52 is attached to the leading edge of a shoulder 47 of the circular saw plate 42 by a pin 56. Each link is separately attached to a shoulder and does not connect to any other links. Accordingly, the clevis in Wright is not capable of attaching to a connecting link at each end forming a saw chain.



Moreover, the clevis, as described in Wright, comprises only one connection point; therefore, there is no way for the clevis to be “adapted” to act as a link and pivotally connect to other links on a saw chain, nor is there any suggestion in Wright to modify the structure in such a way, since there is no saw chain comprising links that would call for such construction.

Additionally, claims 1, 15, 18 and 19 has been amended to include that the base member further comprises a lower wedge surface with a second taper and the cutting member further comprises an under surface having a fourth taper, such that the second taper and the fourth taper extend at an angle of about 10° relative to a direction opposite to chain travel. Contrastingly, Wright teaches that only the upper portion of the clevis and the upper of the tooth shank include angled surfaces.(See Figs. 5 and 7). Although Wright teaches that the sides of the shank are also tapered rearwardly; there is no teaching or slight suggestion that the bottom surface of the shank and/or the lower surface of the clevis are tapered to any degree.

The Examiner submits that although Wright lacks the specific material designations for each of the base member and cutter member, the use of such material is old and well known in the art, as illustrated in Funakubo. Applicant submits, however, that even assuming Funakubo discloses the use of such materials in cutting members and even assuming the propriety of combining Funakubo with Wright, such a combination still does not disclose or suggest the claimed invention. Thus, withdrawal of the rejection is respectfully requested.

Additionally, claims 1-3, 6-9, 13-16, 18-20, 23 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Raetz in view of Funakubo, or in the alternative over Raetz in view of Funakubo and Wright. Specifically, the Examiner submits that Raetz discloses a link for a saw chain including a base member and cutting member as presently claimed. Although Raetz lacks the specific material designations, the Examiner argues that use of such material on cutting teeth is old and well known in the art, as illustrated by Funakubo. Applicants respectfully traverse for at least the following reason. Raetz in view of Funakubo, and/or Raetz in view of Funakubo and Wright, does not teach or suggest the subject invention as presently claimed.

Particularly, Raetz fails to teach or suggest a base member having a seat surface with a first taper and a lower surface with a second taper and a cutting member further comprising an

upper surface with a third taper and an under surface having a fourth taper, such that the first and third taper extend at an angle ranging from about 0.5° to about 45° relative to a direction of intended chain travel and the second taper and the fourth taper extend at an angle of about 0.5° to about 45° relative to a direction opposite to intended chain travel. Rather, Raetz teaches that the cutting body can be secured to a link body in a simple manner by providing a stud with a rectangular or square cross section. (col. 2, lines 23-25). The Examiner argues that the link and cutting member in Raetz are fully capable of being oriented at substantially any angle based on the type of orientation desired by the use and based on any type or form of supporting structure provided therefore. Applicant respectfully submits that this reasoning is improper, at least because the tapers provided in the presently claimed invention are not based on a desired orientation, but rather are implemented to provide the structural benefit of being self-locking. Although it has been held that matters relating to orientation only which have no mechanical function cannot be relied upon for patentability, the tapers are not simply an aesthetic design change, but add a distinct mechanical function. (See *In re Seid*, 161 F.2d 229, 73 USPQ 431 (CCPA 1947).

The Examiner further argues that the taper of feature 7 is considered to meet the “about” language set forth in the claim. Applicant, however, submits that feature 7 does not include **any** tapers. (See Figures 1 and 3, along with col. 2, lines 23-25). Applicant is unclear how a feature that is completely null of any tapers can be considered to meet language that claims a taper, even if the language “about” is used. Once again, Applicant submits that the angled tapers provide a unique benefit to the way in which the cutting member attached to the base member, particularly the benefit of self-locking. Raetz does not teach or slightly contemplate this limitation.

The Examiner further takes Official Notice in the alternative that providing taper angles within the claimed range for fitting cutting teeth to their support structure is old and well known in the art and provides various well known benefits including self-locking as well as self-releasing characteristics as taught by Wright. Applicant submits that as stated in more detail above, Wright does not teach or slightly suggest that the bottom surface of the shank and/or the lower surface of the clevis are tapered to any degree. Accordingly, it is not appropriate for the Examiner to take such Official Notice that providing such a structure is old and well known in the art, without evidence to support such a position.

Applicant submits that for at least the aforementioned reasons, the subject claims

distinguish patentably over the references of record. Accordingly, withdrawal of the rejections of independent claims 1, 15, 18, and 19 (along with claims 2-3, 5-14, 16-17, 20-27, 29 and 30 that respectively depend therefrom) is respectfully requested.

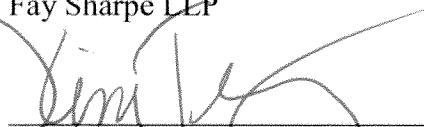
## CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 1-3, 5-27, 29 and 30) are now in condition for allowance.

Respectfully submitted,

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6-23-2010  
Date

  
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Date: <u>June 23, 2010</u>	Name: <u>Barbara Brazier</u>